

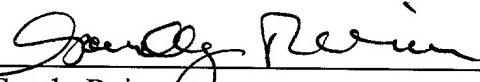
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PATENT

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June 11, 2001

Date


Sandy Reisman

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Present Application

Applicants : Kenneth H. Abbott, Joshua M. Freedman, Dan Newell, and James O. Robarts
Filed : June 11, 2001
For : SUPPLYING NOTIFICATIONS RELATED TO SUPPLY AND CONSUMPTION OF USER CONTEXT DATA
Docket No. : 294438022US2

Prior Application

Application No. : 09/724,949
Filed : November 28, 2000
Art Unit : 2173
Confirmation No. : 8651

Commissioner for Patents
Washington, DC 20231

PRELIMINARY AMENDMENT

Sir:

Please amend the application as follows:

In the Specification:

Please replace the paragraphs beginning at lines 4 and 11 of page 1 with the following paragraphs, respectively.

This application is a continuation of U.S. Patent Application No. 09/724,949, filed November 28, 2000 and currently pending. U.S. Patent Application No. 09/724,949 is a continuation-in-part of U.S. Patent Application No. 09/216,193, entitled "METHOD AND SYSTEM FOR CONTROLLING PRESENTATION OF INFORMATION TO A USER BASED ON THE USER'S CONDITION" and filed December 18, 1998, and a continuation-in-part of U.S. Patent Application No. 09/464,659, entitled "STORING AND RECALLING INFORMATION TO AUGMENT HUMAN MEMORIES" and filed December 15, 1999, both of which are hereby incorporated by reference in their entirety.

U.S. Patent Application No. 09/724,949 also claims the benefit of provisional U.S. Patent Application No. 60/194,222 (Attorney Docket No. 294438022US), entitled "SUPPLYING NOTIFICATIONS RELATED TO SUPPLY AND CONSUMPTION OF USER CONTEXT DATA" and filed April 2, 2000, and of provisional U.S. Patent Application No. 60/193,999 (Attorney Docket No. 294438008US), entitled "OBTAINING AND USING CONTEXTUAL DATA FOR SELECTED TASKS OR SCENARIOS, SUCH AS FOR A WEARABLE PERSONAL COMPUTER" and filed April 2, 2000, both of which are hereby incorporated by reference in their entirety.

In the Claims:

Please cancel claims 1-61 and 72-75.

Please add the following claims:

82. (New) A method in a wearable computer for providing information about a current state of a user of the wearable computer, the current state modeled with multiple state attributes, the wearable computer executing a plurality of state server modules to supply values for the state attributes, executing a plurality of state client modules to receive and process values for the state attributes, and executing an intermediary module to facilitate exchange of state attribute values, the method comprising:

under control of each of the executing state server modules, sending to the intermediary module values for at least one of the state attributes;

under control of multiple of the executing state client modules, sending to the intermediary module a notification request for a specified type of event such that the state client module that sent the notification request requests to be notified when the specified type of event occurs; and

under control of the intermediary module,

receiving the sent state attribute values and the sent notification requests;

sending at least some of the received state attribute values to at least some of the state client modules; and

for each of the received notification requests,

in response to the receiving of the notification request, monitoring occurrences of events in order to detect an occurrence of the type of event specified for that notification request; and

when an occurrence of the type of event specified for that notification request is detected, notifying the state client module that sent the notification request of the occurrence,

so that the state client modules can automatically be notified of occurrences of events of interest.

83. (New) The method of claim 82 wherein the specified type of event is related to availability of a value for a specified state attribute.

84. (New) The method of claim 82 wherein the specified type of event is related to availability of a specified state server module.

85. (New) The method of claim 82 including, under the control of the intermediary module:

receiving from a first of the state server modules a notification request for a specified type of event such that the first state server module will be notified when the specified type of event occurs;

in response to the receiving of the notification request from the first state server module, monitoring occurrences of events in order to detect an occurrence of the type of event specified for that notification request; and

when an occurrence is detected of the type of event specified for the notification request from the first state server module, notifying the first state server module of the occurrence.

86. (New) The method of claim 82 wherein at least some of the notification requests include a criteria related to the type of event specified for that notification request, and wherein the notifying of a state client module of the occurrence of the type of event specified in the notification request sent by that state client module is performed only when the criteria is satisfied by that occurrence.

87. (New) The method of claim 82 wherein at least some of the notification requests include an indication of a number of times that the state client module that sent that notification request is to be notified of occurrences of the type of event specified for that notification request.

88. (New) The method of claim 82 wherein at least some of the notification requests include an indication of an end date after which the state client module that sent that notification request is not to be notified of occurrences of the type of event specified for that notification request.

89. (New) The method of claim 82 wherein the monitoring of occurrences of events includes analyzing received state attribute values and received messages.

90. (New) The method of claim 82 including, under the control of the intermediary module:

receiving from a first of the state client modules an indication of a condition related to values of one or more specified state attributes, the indicated condition such that the first state client module desires to know when the condition has been satisfied;

determining whether any received values for the specified state attributes satisfy the condition; and

when it is determined that the condition is satisfied, notifying the first state client module.

91. (New) The method of claim 82 including:

monitoring activities of a module;

detecting an occurrence of an event; and

automatically without further intervention by the module,

determining based on the monitoring that the detected occurrence would be of interest to the module; and

notifying the module of the detected occurrence.

92. (New) The method of claim 82 including, under the control of a first of the state client modules:

receiving a sent current value from the intermediary module; and

presenting information to a user of the first state client module based on the receiving of the value.

93. (New) A method in a computer for providing information about a current state that is modeled with multiple state attributes, the method comprising:

receiving from a module a request to receive notification when a specified type of occurrence related to at least one of the multiple state attributes is detected;

after the receiving of the request, detecting an occurrence of the specified type; and

notifying the module of the detected occurrence.

94. (New) The method of claim 93 wherein the detecting of the occurrence includes monitoring occurrences.

95. (New) The method of claim 94 wherein the monitoring includes detecting changes in the modeling of the current state.

96. (New) The method of claim 93 wherein the specified type of occurrence is satisfaction of a condition related to a value of at least one of the state attributes, and wherein the detecting of the occurrence includes analyzing changes in the values of the at least one state attributes in order to determine when the condition is satisfied.

97. (New) The method of claim 96 wherein the condition relates to a specified one of the state attributes having a specified value.

98. (New) The method of claim 93 wherein the module is a source of values for at least one of the state attributes.

99. (New) The method of claim 93 wherein the module is a consumer of values for at least one of the state attributes.

100. (New) The method of claim 93 wherein the specifying of the type of occurrence includes specifying criteria that define the type of occurrence, and wherein the specified type of occurrence includes satisfying the specified criteria.

101. (New) The method of claim 100 wherein the specified criteria are not satisfied by the modeled current state at a time of the receiving of the request.

102. (New) The method of claim 100 wherein the specified criteria is a change in a value of a specified state attribute.

103. (New) The method of claim 93 wherein the specified type of occurrence includes a source becoming available to supply values for a specified state attribute.

104. (New) The method of claim 103 wherein the detecting includes identifying receipt of a value for the specified state attribute.

105. (New) The method of claim 103 wherein the detecting includes identifying receipt from a source of an indication of an ability to supply values for the specified state attribute.

106. (New) The method of claim 93 wherein the specified type of occurrence includes availability of a value of a specified state attribute that satisfies a specified criteria.

107. (New) The method of claim 106 wherein each of the sources available to supply values for the specified state attribute at a time of the receiving of the

request are unable to supply a value for the specified state attribute that satisfies the specified criteria.

108. (New) The method of claim 106 wherein the detecting includes repeatedly requesting at least one of the sources to supply a value for the specified state attribute.

109. (New) The method of claim 93 wherein the specified type of occurrence includes a specified source becoming available to supply state attribute values, and wherein the detecting includes determining that the specified source is currently able to supply state attribute values.

110. (New) The method of claim 109 wherein the specified source is not available to supply state attribute values at a time of the receiving of the request.

111. (New) The method of claim 93 wherein the specified type of occurrence includes a specified client becoming available to receive state attribute values.

112. (New) The method of claim 111 wherein the detecting of the occurrence of the specified type is based on receiving a request from the specified client for a value of a state attribute.

113. (New) The method of claim 93 wherein the specified type of occurrence includes at least one client expressing an interest in receiving values of a specified state attribute.

114. (New) The method of claim 93 wherein the computer has access to various devices, and wherein the specified type of occurrence includes a value of one of the state attributes indicating that access to a specified device has become available.

115. (New) The method of claim 93 wherein the specified type of occurrence includes access to a group of themed attributes becoming available.

116. (New) The method of claim 93 wherein the providing of the information about the current state is performed by a characterization module, and wherein the specified type of occurrence includes a value of one of the state attributes indicating that access to other functionality provided by the characterization module has become available.

117. (New) The method of claim 116 wherein the other functionality is a specified mediator.

118. (New) The method of claim 117 wherein the detecting of the occurrence of the specified type is based on identifying software being loaded that when executed will provide mediating for the specified mediator.

119. (New) The method of claim 93 wherein the request includes an indication of a number of times that the notifying of the module is to occur.

120. (New) The method of claim 93 wherein the request includes an indication of times during which the notifying of the module is to occur.

121. (New) The method of claim 93 wherein the state attributes represent information about a user of the computer.

122. (New) The method of claim 121 wherein the represented information reflects a modeled mental state of the user.

123. (New) The method of claim 93 wherein the state attributes represent information about the computer.

124. (New) The method of claim 93 wherein the state attributes represent information about a physical environment.

125. (New) The method of claim 93 wherein the state attributes represent information about a cyber-environment of a user of the computer.

126. (New) The method of claim 93 wherein the state attributes represent current predictions about a future state.

127. (New) The method of claim 93 wherein the notifying of the module of the detected occurrence prompts the module to present information to a user of the module.

128. (New) The method of claim 93 wherein the notifying of the module of the detected occurrence includes supplying information about the detected occurrence.

129. (New) The method of claim 93 wherein the request indicates an event such that an occurrence of the indicated event is an occurrence of the specified type.

130. (New) A computer-readable medium whose contents cause a computing device to provide information about a current state that is represented with multiple attributes, by performing a method comprising:

receiving from a module a request to receive notification when a specified type of occurrence related to at least one of the multiple state attributes is detected;

after the receiving of the request, detecting an occurrence of the specified type; and

notifying the module of the detected occurrence.

131. (New) The computer-readable medium of claim 130 wherein the computer-readable medium is a memory of the computing device.

132. (New) The computer-readable medium of claim 130 wherein the computer-readable medium is a data transmission medium transmitting a generated data signal containing the contents.

133. (New) A computing device for providing information about a current state that is represented with multiple attributes, comprising:

a request receiver component that is capable of receiving from a module a request to receive notification when a specified type of occurrence related to at least one of the multiple state attributes is detected; and

a notifier component that is capable of, after the receiving of the request, detecting an occurrence of the specified type and notifying the module of the detected occurrence.

134. (New) The computing device of claim 133 wherein the request receiver component and the notifier component are part of an intermediary module executing in memory of the computing device.

135. (New) The computing device of claim 133 further comprising multiple sources and multiple clients executing in memory of the computing device.

136. (New) A computing device for providing information about a current state that is represented with multiple attributes, comprising:

means for receiving from a module a request to receive notification when a specified type of occurrence related to at least one of the multiple state attributes is detected;

means for, after the receiving of the request, detecting an occurrence of the specified type; and

means for notifying the module of the detected occurrence.

137. (New) A method in a computer for providing information about a current state that is modeled with multiple state attributes, the method comprising:

receiving from a module an indication of a condition related to values of one or more specified state attributes, the indicated condition such that the module desires to be notified when the condition has been satisfied;

after the receiving of the indication, detecting satisfaction of the indicated condition; and

notifying the module of the detected satisfaction.

138. (New) The method of claim 137 wherein the detecting of the satisfaction includes monitoring changes in the modeling of the current state.

139. (New) The method of claim 137 wherein the detecting of the satisfaction includes analyzing changes in the values of the at least one state attributes in order to determine when the condition is satisfied.

140. (New) The method of claim 137 wherein the condition relates to a specified one of the state attributes having a specified value.

141. (New) The method of claim 137 wherein the module is a source of values for at least one of the state attributes.

142. (New) The method of claim 137 wherein the module is a consumer of values for at least one of the state attributes.

143. (New) The method of claim 137 wherein the indication of the condition includes an indication of a number of times that the notifying of the module is to occur.

144. (New) The method of claim 137 wherein the indication of the condition includes an indication of times during which the notifying of the module is to occur.

145. (New) The method of claim 137 wherein the state attributes represent information about a user of the computer.

146. (New) The method of claim 145 wherein the represented information reflects a modeled mental state of the user.

147. (New) The method of claim 137 wherein the notifying of the module of the detected satisfaction prompts the module to present information to a user of the module.

REMARKS

Applicants have canceled claims 1-61 and 72-75 and have added claims 82-147 in order to clarify the subject matter of their invention. Thus, claims 62-71 and 76-147 are now pending.

Applicants respectfully request consideration of this application and its early allowance.

Respectfully submitted,
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APPENDIX – SPECIFICATION
MARKED TO SHOW CHANGES

Paragraphs beginning at Page 1, lines 4 and 11, respectively:

This application is a continuation of U.S. Patent Application No. 09/724,949, filed November 28, 2000 and currently pending. U.S. Patent Application No. 09/724,949 [This application] is a continuation-in-part of U.S. Patent Application No. 09/216,193, entitled “METHOD AND SYSTEM FOR CONTROLLING PRESENTATION OF INFORMATION TO A USER BASED ON THE USER’S CONDITION” and filed December 18, 1998, and a continuation-in-part of U.S. Patent Application No. 09/464,659, entitled “STORING AND RECALLING INFORMATION TO AUGMENT HUMAN MEMORIES” and filed December 15, 1999, both of which [. Both of these applications] are hereby incorporated by reference in their entirety.

U.S. Patent Application No. 09/724,949 [This application] also claims the benefit of provisional U.S. Patent Application No. 60/194,222 (Attorney Docket No. 294438022US), entitled “SUPPLYING NOTIFICATIONS RELATED TO SUPPLY AND CONSUMPTION OF USER CONTEXT DATA” and filed April 2, 2000, and of provisional U.S. Patent Application No. 60/193,999 (Attorney Docket No. 294438008US), entitled “OBTAINING AND USING CONTEXTUAL DATA FOR SELECTED TASKS OR SCENARIOS, SUCH AS FOR A WEARABLE PERSONAL COMPUTER” and filed April 2, 2000, both of which are [. These applications are both] hereby incorporated by reference in their entirety.